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# SAFETY DATA SHEET

## Section 1. Identification

Diethylzinc

Liquid

Product Name:
Product Type:
CAS Number:
Product Number:
Product Manufacturer:

**Product Information:** 

**In Case of an Emergency:** 

557-20-0 ZN7200 Ereztech LLC 11555 Medlock Bridge Road, Suite 100 Johns Creek, GA 30097 (888) 658-1221 CHEMTREC: 1-800-424-9300 (USA);

+1 703-527-3887 (International); CCN836180 \*\*\* Contact manufacturer for all non-emergency calls.

### Section 2. Hazards Identification



GHS Label Elements Hazard Pictograms: Colorless/clear liquid, garlic-like odor. FLAMMABLE LIQUIDS - Category 2, H225 PYROPHORIC LIQUIDS - Category 1, H250 SUBSTANCE AND MIXTURES, WHICH IN CONTACT WITH WATER, EMIT FLAMMABLE GASES - Category 1, H260 SKIN CORROSION/IRRITATION - Category 1B, H314 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1, H318 SPECIFIC ORGAN TOXICITY, SINGLE EXPOSURE; RESPIRATORY TRACT IRRITATION - Category 3, H335 HAZARDOUS TO THE AQUATIC ENVIRONMENT, ACUTE TOXICITY - Category 1, H400 HAZARDOUS TO THE AQUATIC ENVIRONMENT, CHRONIC TOXICITY – Category 1, H410

Sec	tion 2. Hazards Identification
Signal Word:	DANGER
Hazard Statements:	H225: Highly flammable liquid and vapor.
	H250: Catches fire spontaneously if exposed to air.
	H260: In contact with water releases flammable gases which may
	ignite spontaneously.
	H314: Causes severe skin burns and eye damage.
	H318: Causes serious eye damage.
	H335: May cause respiratory irritation. H400: Very toxic to aquatic life.
	H410: Very toxic to aquatic life with long lasting effects.
Precautionary statements	This. Very toxic to aquatic file with long lasting creets.
Prevention:	P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
	P222: Do not allow contact with air.
	P223: Keep away from any possible contact with water, because of
	violent reaction and possible flash fire.
	P231 + P232: Handle under inert gas. Protect from moisture.
1	P240: Ground/bond container and receiving equipment.
	P241: Use explosion-proof electrical/ventilating/lighting/handling
	equipment.
	P260: Avoid breathing spray and mists.
	P264: Wash skin thoroughly after handling.
	P271: Use only outdoors or in a well-ventilated area. P273: Avoid release to the environment.
	P280: Wear protective gloves/ protective clothing/ eye protection/
	face protection.
Response:	P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT
	induce vomiting.
	P303 + P361 + P353: If on skin (or hair): Take off immediately all
	contaminated clothing. Rinse skin with water/shower.
	P304 + P340: IF INHALED: Remove victim to fresh air and keep at
	rest in a position comfortable for breathing.
	P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for
	several minutes. Remove contact lenses, if present.
	Continue rinsing.
	P310: Immediately call a POISON CENTER or doctor/physician.
	P334 + P335: Brush off loose particles from skin. Immerse in cool
	water/wrap in wet bandages.
	P363: Wash contaminated clothing before reuse.
	P370 + P378: In case of fire: Use alcohol-resistant foam, dry chemical or carbon dioxide for extinction. DO NOT USE

WATER.

P391: Collect spillage.

Section 2. Hazards Identification			
Storage:	<ul> <li>P402 + P404: Store in a dry place. Store in a closed container.</li> <li>P403 + P233: Store in a well ventilated place. Keep container tightly closed.</li> <li>P405: Store locked up.</li> <li>P422: Store under inert gas. Store refrigerated at 2 – 8 °C.</li> </ul>		
Disposal:	P501: Dispose of contents/ container to an approved wasted disposal plant.		
OSHA/HCS Status:	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).		
Hazards Not Otherwise Classified (HNOC):	Product reacts violently with water.		

### Section 3. Composition/Information on Ingredients

Substances Synonyms Formula Molecular Weight CAS-No.	: Zincdiethyl; zinc diethanio : C <sub>4</sub> H <sub>10</sub> Zn : 123.51 g/mol : 557-20-0	: 123.51 g/mol		
Ingredient Name		%	CAS Number	
Diethylzinc		≥ 99	557-20-0	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First Aid Measures

### **Description of Necessary First Aid Measures**

- **General Advice:** Move out of dangerous area. Call a POISON CENTER or doctor/physician immediately. Show this safety data sheet to the doctor in attendance. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- **Eye Contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Rinse for a minimum of 15 minutes. Check for and remove any contact lenses after initial rinse period and continue rinsing for an additional 15 minutes. Keep eyes wide open during rinsing process. Call a POISON CENTER or doctor/physician immediately.

### Section 4. First Aid Measures

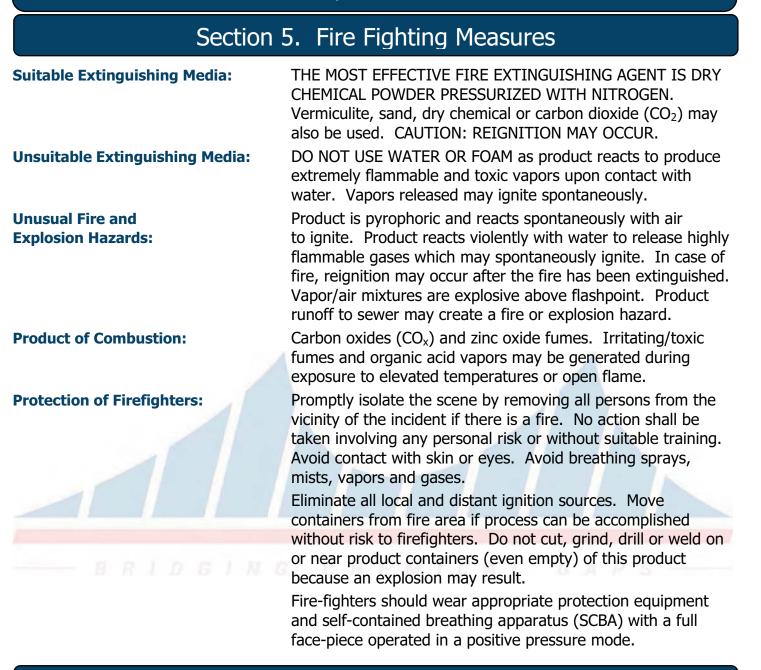
- **Skin Contact:** Remove all contaminated clothing and shoes. Wash off contaminated skin with soap and plenty of water. Call a POISON CENTER or doctor/physician immediately.
- **Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Call a POISON CENTER or doctor/physician immediately.
- **Ingestion:** Do NOT induce vomiting. Rinse mouth. Remove dentures if any. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician immediately.

### Most Important Symptoms/Effects, Acute and Delayed Potential Acute Health Effects

- **Eye Contact:** Causes serious eye damage. Symptoms may include watering, redness, pain, swelling of the eyelids, inability to keep eye open, blurred vison and temporary/permanent loss of vision.
- **Inhalation:** Product is extremely corrosive to mucous membranes and tissues of the upper respiratory tract. Symptoms may include a burning sensation, coughing, coughing up blood (hemoptysis), wheezing, laryngitis, shortness of breath/ difficulty in breathing (dyspnea), blueness (cyanosis) of lips and skin, nausea, headaches, disorientation, general weakness and loss of consciousness.
- Skin Contact: Skin contact with this product may be expected to cause (severe) chemical burns. Symptoms may include reddening of skin, a burning or itching sensation, pain, blistering and tissue necrosis.
- **Ingestion:** Ingestion may be expected to result in burns of the mouth and throat and potential perforation of the esophagus and stomach. Symptoms may include pain when swallowing (odynophagia), difficulty swallowing (dysphagia), fever, nausea, recurrent vomiting (emesis) and vomiting of blood (hematemesis). Severe burns which may be accompanied by perforation of the esophagus and stomach may present additional symptoms of abdominal pain/rigidity, chest and/or back pain.

Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary			
Notes to Physician:	Treat symptomatically.		
Specific Treatments:	No specific treatment.		
Protection of First Responders:	No action taken shall be taken involving any personal risk without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.		

See toxicological information (Section 11)



## Section 6. Accidental Release Measures

### Personal Precautions, Protective Equipment and Emergency Procedures

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid the formation and inhalation of sprays and mists. Provide adequate ventilation. Wear respiratory protection. Put on appropriate personal protective equipment.

For Non-Emergency Personnel:

Accidental Release Measures
If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For Non-Emergency Personnel".
Do not allow dispersal of spilled material and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Spilled material will likely give off smoke and fumes. Ignition may occur immediately. Eliminate all local and distant ignition sources. Move containers from spill area if safe to do so. Avoid allowing the spilled material to get wet or using water to clean up spillages or residues. Use spark-proof tools and explosion-proof equipment.
Contain and collect spillage with a dry, non-combustible binding material (e.g. sand, earth, vermiculite or diatomaceous earth) and place in dry, sealed container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor.
Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with a dry, non-combustible absorbent material (e.g. sand, earth, vermiculite or diatomaceous earth) and place in dry, sealed container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

### Section 7. Handling and Storage

**Precautions:** 

Product is air/moisture sensitive; handle under a dry, inert gas. Nitrogen with less than 5 ppm each of moisture and oxygen is recommended. Keep away from all sources of ignition – NO SMOKING. Avoid formation and inhalation of sprays and mists. Keep container tightly sealed. Avoid contact with skin, eyes and clothing. Do not ingest. Avoid prolonged exposure. Ensure adequate ventilation.

### Section 7. Handling and Storage **Protective Measures:** Protect against electrostatic charges. Use explosion-proof electrical/ventilating/lighting/handling equipment. Use only non-sparking tools and equipment. Put on appropriate personal protective equipment (see Section 8). Keep in the original container kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. **General Occupational Hygiene:** Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Safe Storage Conditions: Product is air/moisture sensitive; store under an inert gas. Nitrogen with less than 5 ppm each of moisture and oxygen is recommended. Store refrigerated at 2 - 6 °C. Keep away from all sources of ignition - NO SMOKING. Store in original container protected from direct sunlight in a dry and wellventilated area, away from incompatible materials and food and drink. Keep container tightly closed and sealed until ready for use. Store locked up.

### Section 8. Exposure Controls/Personal Protection

Introductory Remarks:	These recommendations provide general guidance for handling this product. Because work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and conduct regular repairs. Waste from these procedures should be handled in accordance with Section 13.	
<b>Occupational Exposure Limits:</b>	Product contains no substances with occupational exposure limit values.	
Engineering Controls:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. Provide an eyewash/shower station.	

### Section 8. Exposure Controls/Personal Protection

**Environmental Exposure Controls:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### **Individual Protection Measures**

Hygiene Measures:

Eye/Face Protection:

Skin Protection Hand Protection: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Remove all soiled and contaminated clothing immediately. Do not inhale sprays or mists. Avoid contact with eyes and skin. Ensure that eyewash stations and safety showers are close to the workstation location.

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, or gases. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles, faceshield (8-inch minimum). Refer to 29 CFR 1910.133, ANSI Z87.1, or European Standard EN166.

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Chemical-resistant gloves.

Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. For full contact, use Neoprene or nitrile rubber.

## Section 8. Exposure Controls/Personal Protection

Other Skin Protection:Appropriate footwear and any additional skin protection<br/>measures should be selected based on the task being<br/>performed and the risks involved and should be approved by a<br/>specialist before handling this product.Respiratory Protection:Where risk assessment shows air-purifying respirators are<br/>appropriate use a full-face respirator with multipurpose<br/>combination (US) or type ABEK (EN 14387) respirator<br/>cartridges as a backup to engineering controls. If the respirator<br/>is the sole means of protection, use a full-face supplied air<br/>respirator. Use respirators and components tested and<br/>approved under appropriate government standards such as<br/>NIOSH (US) or CEN (EU).

### Section 9. Physical and Chemical Properties

Physical State:	Liquid.	
Color:	Colorless, clear.	
Odor:	Garlic like.	
Odor Threshold:	No data available.	
pH:	No data available.	
Melting Point:	-28 °C (-18 °F).	
Boiling Point:	124 °C (255.2 °F).	
Flash Point:	-18 °C (-0.4 °F).	
Auto-ignition temperature:	< 0 °C PYROPHORIC.	
Flammability:	Highly flammable liquid and vapor; catches fire spontaneously if exposed to air (PYROPHORIC); in contact with water releases flammable gases which may ignite spontaneously.	
Density:	1.205 g/cm <sup>3</sup> @ 25 °C (77 °F).	
Vapor Pressure:	< 1 mm Hg.	
<b>Relative Vapor Density:</b>	>1	
Water Solubility:	Product reacts violently with water, may ignite spontaneously.	

## Section 10. Stability and Reactivity

### **Reactivity:**

This product is pyrophoric and catches fire spontaneously when exposed to air. Product reacts violently with water and compounds containing active hydrogen such as alcohols and acids and may ignite spontaneously.

## Section 10. Stability and Reactivity

Chemical Stability (cont.):	This product is stable when stored under a dry, inert atmosphere and away from heat. Nitrogen containing less than 5 ppm each moisture and air and a temperature range of $2 - 6$ °C is recommended. This product is not sensitive to impact.
Conditions to Avoid:	Exposure to air/water/moisture, sources of ignition (heat, flames, sparks, electrostatic discharge), extremes of temperature and direct sunlight.
Incompatible Materials:	Air, water, sulfur, active metals, compounds containing active hydrogen (alcohols and acids) and compounds containing oxygen or organic halides.
Hazardous Decomposition Products:	In contact with water, product releases a highly flammable gas which may ignite spontaneously. Hazardous decomposition products formed under fire conditions: carbon oxides and zinc oxide fumes. Irritating/toxic fumes and organic acid vapors may be generated during exposure to elevated temperatures or open flame. In the event of a fire: see section 5.
Possibility of Hazardous Reactions:	Under normal conditions of storage and use noted above, hazardous reactions will not occur. Hazardous reactions or instability may occur under certain conditions of storage or use. In contact with air/water, product releases extremely flammable gases which may ignite spontaneously.

### Section 11. Toxicological Information

### Information on Toxicological Effects

Acute Toxicity Irritation/Corrosion

Sensitization Germ Cell Mutagenicity Carcinogenity IARC

ACGIH

- : No specific data available.
- : No specific data available. Product may be expected to cause thermal and/or chemical burns to the skin, eyes and exposed mucous membranes.
- : No specific data available.
- : No effects known.
- : No component of this product present at levels greater than 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- : No component of this product present at levels greater than 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

## Section 11. Toxicological Information

NTP

OSHA

### **Reproductive Toxicity**

Teratogenicity

Specific Target Organ Toxicity (Single Exposure)

Specific Target Organ Toxicity (Repeated Exposure)

Aspiration Hazard

Information on the Likely Routes of Exposure

**Additional Information** 

- : No component of this product present at levels greater than 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.
- : No component of this product present at levels greater than 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.
- : This product is not expected to cause reproductive or developmental effects.
- : No specific data available.
- : Respiratory tract irritation/damage through thermal and chemical burns.
- : No specific data available.
- : No specific data available.
- : Common routes of exposure: inhalation, dermal (failure to use skin protection), eye (failure to use safety eyewear). Less common: ingestion (failure to employ recommended hygiene measures (e.g. smoking or eating after handling product without washing hands or using hand protection).
- : Ingestion will result in burns of the mouth, throat, esophagus and digestive tract.

To the best of our knowledge, the chemical, physical and toxicological properties of this product have not been thoroughly investigated.

## Section 12. Ecological Information

### **Numerical Measures of Toxicity**

- **Toxicity to Fish**
- Toxicity to Daphnia and Other Aquatic Invertebrates
- Toxicity to Algae
- **Persistence and Degradability**
- **Biodegradability**
- **Bioaccumulative Potential**
- **Mobility in Soil**
- **Other Adverse Effects**

- : No specific data available.
- : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

### Section 13. Disposal Considerations

## Waste Treatment Methods Product

Dispose of in accordance with local, state, and federal regulations. Refer to 40 CFR 260-299 for complete waste disposal regulations. Consult your local, state, or federal agency before disposing of any chemicals.

Contaminated Packaging

Empty containers retain product residue (liquids and vapors) and can be dangerous. Dispose of as unused product. DO NOT EXPOSE SUCH CONTAINERS TO AIR, MOISTURE, HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

### Section 14. Transport Information

	DOT	IMDG	ΙΑΤΑ
UN Number	UN 3394	UN 3394	UN 3394
UN Proper Shipping Name	Organometallic substance, liquid, pyrophoric, water- reactive (Diethylzinc)	ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER- REACTIVE (Diethylzinc)	Organometallic substance, liquid, pyrophoric, water- reactive (Diethylzinc)
Transport Hazard Classes	4.2 (4.3)	4.2 (4.3)	4.2 (4.3)
Packing Group	I	I	I
Environmental Hazards		-	-
Additional Information	IGIN <u>G</u> CK	EMS-No: F-G, S-M	IATA Passenger: Not permitted for transport IATA Cargo: Not permitted for transport.

**Special Precautions for User** 

: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transporting in Bulk According to Annex II of MARPOL 73/78 and the IBC Code : Not applicable.

## Section 15. Regulatory Information

### **TSCA (Toxic Substance Control Act):**

This product is listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory).

### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

Fire Hazard (Flammable solid), Reactivity Hazard (Pyrophoric solid; In contact with water emits flammable gas), Acute Health Hazard (Skin corrosion or irritation; Serious eye damage or eye irritation; Specific Target Organ Toxicity (STOT), single exposure: respiratory irritation).

### **Massachusetts Right to Know Components**

No components are subject to Massachusetts Right to Know Act.

### Pennsylvania Right to Know Components

No components are subject to Pennsylvania Right to Know Act.

### New Jersey Right to Know Components

<u>Compound</u>

Diethylzinc

### **California Proposition 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## Section 16. Other Information

CAS-No.

557-20-0

**Revision Date** 

### National Fire Protection Association (U.S.A.)



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## Section 16. Other Information

Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

### **HMIS Rating**

HEALTH	3
FLAMMABILITY	4
PHYSICAL HAZARD	2

### **History**

**Date of Printing** 

Date of Issue/Date of Revision

### **Date of Previous Issue**

: 4/27/2020 : None.

: 4/27/2020

References

: None available

### **Abbreviations and Acronyms**

ACGIH: American Conference of Governmental Industrial Hygienists.

ATE: Acute Toxicity Estimate

CAS: Chemical Abstracts Service (division of the American Chemical Society).

DOT: US Department of Transportation.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

HMIS: Hazardous Materials Identification System.

HNOC: Hazards Not Otherwise Classified.

IARC: International Agency for Research on Cancer.

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA). IDLH: Immediately Dangerous to Life or Health (US National Institute for Occupation Health and Safety (NIOSH)).

IMDG: International Maritime Code for Dangerous Goods.

NFPA: National Fire Protection Association.

NIOSH: National Institute of Occupational Safety and Health.

NTP: National Toxicology Program.

OSHA: Occupational Safety and Health Administration.

PEL: Permissible Exposure Limits.

REL: Recommended Exposure Limits.

SARA: Superfund Amendments and Reauthorization Act.

STOT: Specific Target Organ Toxicity.

TLV: Threshold Limit Values (ACGIH).

TWA: Time Weighted Average.

VOC: Volatile Organic Compound.

## Section 16. Other Information

### **Disclaimer**

The information herein is believed to be accurate and is presented in good faith; however, no warranties or representations are made by Ereztech LLC regarding the accuracy or completeness of the information. Ereztech LLC shall not be liable for any damages resulting from the handling, or from the contact with the above product.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

